

US011214897B2

(12) United States Patent Berrian et al.

(10) Patent No.: US 11,214,897 B2

(45) **Date of Patent:**

Jan. 4, 2022

(54) KNITTED CUSHION REGIONS

(71) Applicant: **NIKE, Inc.**, Beaverton, OR (US)

(72) Inventors: Travis J. Berrian, Portland, OR (US);

Bryan N. Farris, North Plains, OR (US); Margaret P. St. Clair, Portland,

OR (US)

(73) Assignee: NIKE, Inc., Beaverton, OR (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 223 days.

(21) Appl. No.: 16/378,821

(22) Filed: Apr. 9, 2019

(65) Prior Publication Data

US 2019/0313728 A1 Oct. 17, 2019

Related U.S. Application Data

(60) Provisional application No. 62/658,232, filed on Apr. 16, 2018.

(51)	Int. Cl.	
	D04B 1/24	(2006.01)
	A43B 1/04	(2006.01)
	A43B 23/04	(2006.01)
	A43B 23/02	(2006.01)
	D04B 1/10	(2006.01)

(52) U.S. Cl.

(58) Field of Classification Search

CPC ... D04B 1/22; D04B 1/24; D04B 1/16; D04B 1/102; D04B 7/28; D04B 9/38; A43B 1/04; A43B 23/0245; A43B 23/042

See application file for complete search history.

(56) References Cited

U.S. PATENT DOCUMENTS

5,319,869	A	6/1994	McDonald et al.		
5,603,232	A *	2/1997	Throneburg A41B 11/02		
			2/239		
			Friton et al.		
7,793,434	B2 *	9/2010	Sokolowski A43B 23/0235		
			36/45		
8,302,329	B2	11/2012	Hurd et al.		
(Continued)					

FOREIGN PATENT DOCUMENTS

CN	103561605 A	2/2014	
CN	204763686 U	11/2015	
	(Continued)		

OTHER PUBLICATIONS

International Search Report and Written Opinion in International Application No. PCT/US2019/025206, dated Aug. 9, 2019, 16 pages.

Primary Examiner — Danny Worrell (74) Attorney, Agent, or Firm — Shook, Hardy & Bacon, LLP

(57) ABSTRACT

An upper may include a knitted component having a first surface and a second surface. The knitted component may include at least one integrally knitted cushion region located on the second surface. The cushion region may include a plurality of non-planar structures that project away from the second surface of the knitted component by at least 1 mm, and the cushion region may be located in a rearfoot region of the upper.

20 Claims, 17 Drawing Sheets

